

Claims

1. A vent device for a bottle, the vent device comprising a vent aperture and a one-way valve in fluid communication with the vent aperture, a vent path being defined by the vent aperture.
2. A bottle assembly including a bottle having an opening for receiving a fluid, a closure for closing the opening, the closure having a fluid outlet to enable egress of the fluid from the bottle, and a vent device, the vent device comprising a one-way valve, a vent path being defined by the one-way valve from the exterior to the interior of the bottle, the vent path being different from the fluid outlet, whereby the vent path permits air to vent into the bottle on creation of a partial vacuum as a result of the fluid passing to the exterior of the bottle via the fluid outlet.
3. A bottle assembly according to claim 2 in which the vent device comprises a vent aperture in fluid communication with the one-way valve.
4. A bottle assembly according to claim 2 or 3, in which the closure and the bottle define a gap, the vent path being defined by the gap and the vent aperture.
5. A bottle assembly according to claim 4, in which the closure has a closure threaded portion, the bottle having a bottle threaded portion, in which the gap is defined between the threaded portions.
6. A bottle assembly according to claim 5 in which one or both of the threaded portions are discontinuous.
7. A bottle assembly according to any one of claims 2 to 6, in which the vent device has a vent inlet, which, in use, is substantially covered by the closure, thereby preventing the vent inlet from being blocked.

8. A bottle assembly according to any of claims 2 to 7 in which the vent device is disposed between the bottle and the closure.
9. A bottle assembly according to claim 8 when dependent on claim 5 in which the vent device is releasably secured between the bottle and the closure due to engagement between the threaded portions.
10. A bottle assembly according to claim 8 or 9 in which the vent device forms a seal between the bottle and the closure.
11. A bottle assembly according to any one of claims 2 to 7 in which the vent device is disposed on a neck of the bottle.
12. A bottle assembly according to claim 11 in which the vent device is secured to the neck via a screw fit, or an interference fit.
13. A bottle assembly according to any one of claims 2 to 11 in which the vent device is integral with the bottle.
14. A bottle assembly according to any one of claims 2 to 11 in which the vent device is integral with the closure.
15. A bottle assembly according to any one of claims 2 to 14 in which the closure includes a closure vent aperture which forms part of the vent path.
16. A bottle assembly according to any one of claims 2 to 15 in which the bottle is one of a baby bottle or a sports drink bottle.
17. A bottle assembly according to any one of claims 2 to 16 in which the vent device includes a shut-off device operable between an open position whereby air is able to vent into the bottle, and a closed position whereby air is not able to vent into the bottle.

18. A bottle assembly according to any one of claims 2 to 17 further including a fluid valve operable between an open position whereby the fluid is able to flow from the bottle, and a closed position whereby the fluid is not able to flow from the bottle.
19. A bottle assembly according to claim 18 when dependent on claim 17 in which the shut-off device and the fluid valve are arranged such that closing the fluid valve closes the shut-off device.
20. A bottle assembly according to claim 19 in which opening the fluid valve opens the shut-off device.
21. A vent device or a bottle assembly according to any preceding claim, in which the vent device comprises a body and a vent projection, the body including part of the vent aperture, the vent projection including part of the vent aperture, wherein both parts of the vent aperture are in fluid communication.
22. A vent device or a bottle assembly according to claim 21 in which the vent projection is releasably attachable to the body.
23. A vent device or a bottle assembly according to claim 22 in which the vent body is selected from a plurality of vent bodies having a different diameter so as to correspond to the diameter of a known bottle, and the vent projection is the same size for all vent body diameters.
24. A vent device or a bottle assembly according to any one of claims 21 to 23 in which the one-way valve is provided on the vent projection.
25. A vent device or a bottle assembly according to any preceding claim in which the vent device is annular.
26. A vent device or a bottle assembly according to any preceding claim, in which the vent device has an outer wall, in which the outer wall has a stepped profile.

27. A vent device or a bottle assembly according to claim 26 when dependent on claim 25 in which the vent device has an annular outer wall, and the annular outer wall has a stepped profile.
28. A vent device or a bottle assembly according to claim 27 in which the stepped profile is defined by a first stepped portion which locates on a neck of a bottle, and a second stepped portion which locates in a neck of a bottle.
29. A vent device or a bottle assembly according to claim 28 in which the vent aperture comprises a bore through the first and second stepped portions.
30. A vent device or a bottle assembly according to any preceding claim in which the vent device includes a fluid aperture to allow fluid to pass therethrough.
31. A vent device or a bottle assembly according to claim 30 when dependent on claim 21 in which the vent projection is offset from the fluid aperture.
32. A vent device or a bottle assembly according to any preceding claim in which the vent aperture comprises a plurality of vent inlets in fluid communication with the one-way valve.
33. A vent device or a bottle assembly according to any preceding claim in which the bottle is a known bottle.
34. A bottle assembly as described substantially herein with reference to the accompanying drawings.
35. A vent device as described substantially herein with reference to the accompanying drawings.